

Work Order ID 163400

163400

Page 1

Tuesday, June 27, 2017 11:37:33 AM

Item ID: D4780-041 Accept *N9000040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Fwd Cover Mounting Bracket Assembly
 Start Date: 7/6/2017 Start Qty: 4.00 *4* Cust Item ID:
 Required Date: 7/14/2017 Req'd Qty: 4.00 *4* Customer:
 Reference:

Approvals: Process Plan: DAS Date: JUL 03 2017 Tooling: _____ Date: _____ Run Start *NR1*
 QC: 21 Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4780	A								
100	FLOW WATER JET	0.07							
100									
Waterjet	Memo	0.34							
FLOW CNC Waterjet	1-Cut D4780-1 as per Dwg Dwg Rev: <u>A</u> Prog Rev: <u>A</u> 2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.04							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.08							
Quality Control									

④ sc 17/07/05
 DAS
 45
 9-89

④ sc 17/07/05
 DAS
 45
 9-89

4 sc 17/07/05
 DAS
 38
 9-89
 JUL 06 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 163400

Tuesday, June 27, 2017 11:37:34 AM

163400

Page 2

Item ID: D4780-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Fwd Cover Mounting Bracket Assembly

Start Date: 7/6/2017 Start Qty: 4.00 ***4***

Cust Item ID:

Required Date: 7/14/2017 Req'd Qty: 4.00 ***4***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Brake NC Brake NC	Bend as per dwg NC BRAKE Memo	0.15 0.21			DAS 30 9-89	(4)			JUL 11 2017
140 *140* Small Fab Small Fab	 Memo 1- C'sink holes as per dwg	0.02 0.22				4X			17/07/10
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.08				4			JUL 10 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

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Start Date: 7/6/2017 Start Qty: 4.00 ***4***

Cust Item ID:

Required Date: 7/14/2017 Req'd Qty: 4.00 ***4***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Chemical Conversion Coat per QSI005 4.1	0.00							
160						(X4)	Ø		2017/07/11
HandFinish	Memo	0.46							BEB
Hand Finishing									
165	QC7-Inspect Chemical Conversion Coat	0.00							
165									4 Ø 17-07-12
QC	Memo	0.04							DAS 34 9-89
Quality Control									
170	Black Sandtex(Ref:4.3.5.7) per QSI005 4.3	0.00							
170	M 136370								4 Ø 17-07-12
Powdercoat	Memo	0.21							DAS 34 9-89
Powder Coating	START TIME: 9:15 OVEN TEMPERATURE: 320° FINISH TIME: 9:45								

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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

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Page 4

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Start Date: 7/6/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 7/14/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.04				4x			17/07/13 DAS 36 9-89
190 *190* Small Fab Small Fab	1- Install nutplate as per dwg Memo	0.00 0.36				4x			17/07/13 DAS 36 9-89
200 *200* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.08				4			JUL 13 2017 DAS 38 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Work Order ID 163400

Tuesday, June 27, 2017 11:37:34 AM

163400

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Item ID: D4780-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Fwd Cover Mounting Bracket Assembly

Start Date: 7/6/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 7/14/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

Identify as per dwg & Stock Location: **87125**

0.00

210

Packaging

Memo

0.04

Packaging

4x**26**
9-89

JUL 13 2017

220

QC21- Final Inspection - Work Order Release

0.00

220

QC

Memo

0.40

Quality Control

17/7/17

JUL 13 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval				
Description Work Order Deviation				Disposition				Completed By			
								Lead hand / Supervisor Approval Verification			
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Root Cause		FAULT CATEGORY									
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐						
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐						
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐						
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐						
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐						
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐						
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐						
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐						
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐						
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐						
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____									
Misidentified ☐	Past Due ☐										

Picklist Print

Tuesday, June 27, 2017 11:37:31 AM

Page 1
1

Work Order ID: 163400

163400

Parent Item: D4780-041

D4780-041

Parent Item Name: Fwd Cover Mounting Bracket Assembly

Start Date: 7/6/2017

Required Date: 7/14/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 13.03.13 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6S.032

Purchased

No

100

sf

96.0236

0.0722

0.304

M6061T6S 032

**

6061-T6 Sheet 0.032"

Location

Loc Qty

Loc Code

MAT021

96.023563

DAS
45
9-89

m131352

4.020037

m135724

49.103526

0.4

m136942

42.9

MS20426AD3-4

Purchased

No

190

Each

7,530.000

4

16

MS20426AD3-4

**

RIVET

Location

Loc Qty

Loc Code

GA

5872

m134294

1921

m136444

3951

ST312

1658

m134294

1658

135274 (16x)

MS21059L3

Purchased

No

190

Each

162.0000

2

8

MS21059L 3

**

Nut Plate

Location

Loc Qty

Loc Code

GA

83

M137412

3

M137659

30

M137710

50

ST301

79

M137587

4

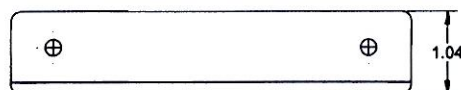
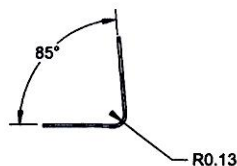
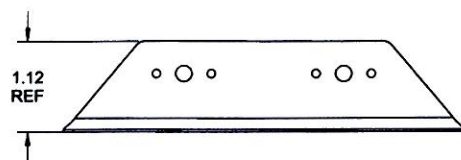
M137820

75

2
6

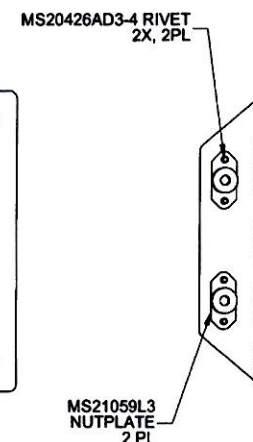
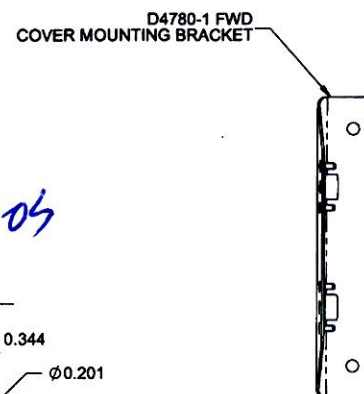
17/07/13
DAS 36 9-89

QTY -041	P/N	DESCRIPTION
X	D4780-041	FWD COVER MOUNTING BRACKET ASSY
1	D4780-1	FWD COVER MOUNTING BRACKET
4	MS20426AD3-4	RIVET, CSK
2	MS21059L3	NUTPLATE

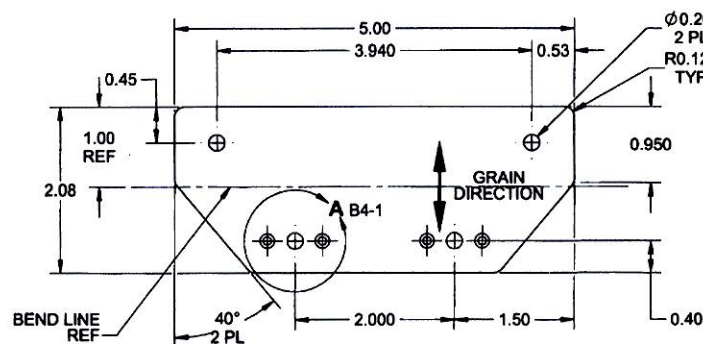


D4780-1 FWD COVER MOUNTING BRACKET
(MAKE FROM D4780-1F)

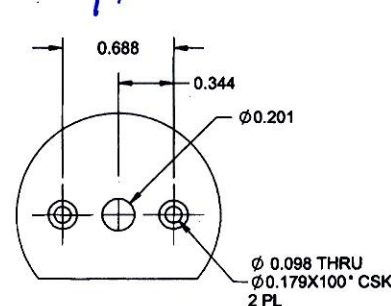
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 163800 MS
170705



D4780-041 FWD COVER MOUNTING BRACKET ASSY



D4780-1F FLAT PATTERN



DETAIL A B7-1
SCALE 2X
2 PL

NOTES:

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.032" THICK, PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 (REF. DART SPEC. M6061T6S.032)
- 2) FINISH: D4780-1F: NONE, D4780-1: CHEMICAL CONVERSION COATING PER DART QSI 005 4.1, POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3, D4780-041: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4780-041" AND B/N USING FINE POINT PERMANENT INK MARKER PER DART QSI 044 METHOD 6.1
- 7) WEIGHT: 0.02 lbs
- 8) PROFILE PER DRAWING FILE "D4780-1F-REVA.DXF"

RELEASED
2013-03-11

A	NEW RELEASE	DB	13.03.01
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DB		
CHECKED	AR	DRAWING NO.	REV. A
MFG. APPR.	AR	D4780	SHEET 1 OF 1
APPROVED	AR	TITLE	SCALE
DE APPR.	AR	FWD COVER MOUNTING BRACKET ASSY	NTS
DATE	13.03.01	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	